Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

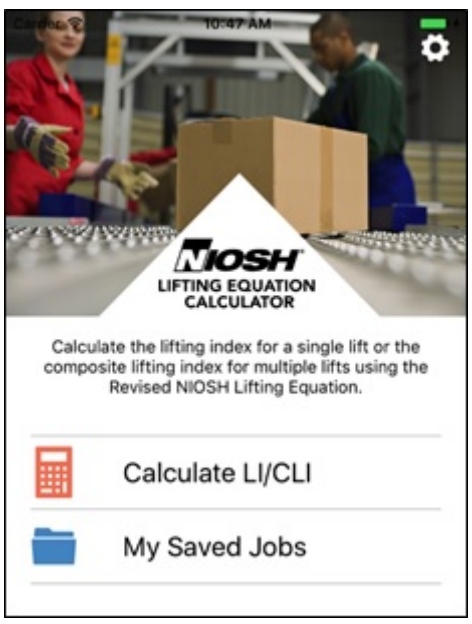
NIOSH Lifting Equation App: NLE Calc

NIOSH Lifting Equation App: NLE Calc

The National Institute for Occupational Safety and Health (NIOSH) Lifting Equation mobile application, NLE Calc, is a tool to calculate the overall risk index for single and multiple manual lifting tasks. This application provides risk estimates to help evaluate lifting tasks and reduce the incidence of low back injuries in workers.

Download NLE Calc today!

Apple iTunes
Google Play



Key Benefits

- Calculates the composite lifting index (CLI) for multiple lifting tasks
- Uses equations approved by NIOSH ergonomists, who were the original creators of the NIOSH Lifting Equation (NLE)
- Promotes better musculoskeletal health
- Raises workers' awareness about their job tasks
- Helps workers make informed decisions about the potential hazards to their musculoskeletal health
- Serves as job design guidelines for manual lifting tasks
- Can be used as a research tool to collect manual lifting data

Send Us Your Feedback or Request Help

- NIOSHMSDProgram@cdc.gov
- NLE Calc Science Blog post

Frequently Asked Questions (FAQ)

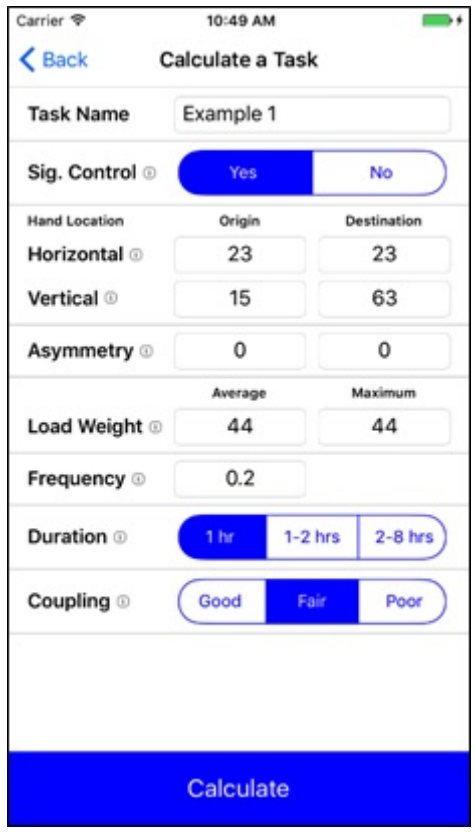
What are the main features of this app?

- This app is one of the first mobile apps that can calculate the CLI for multiple lifting tasks.

Why did NIOSH develop the NLE Calc?

- Workers in healthcare, manufacturing, transportation, warehousing, agriculture, public safety, retail trade, and other industries are often responsible for manually lifting and moving objects on the job. Research shows that exposure to repetitive motion, force, vibration, and awkward positions puts workers at risk for developing work-related

musculoskeletal injuries. NIOSH wanted to develop a mobile application based on the Revised NIOSH Lifting Equation (RNLE) to help practitioners and researchers determine guidelines for job-related manual lifting tasks.

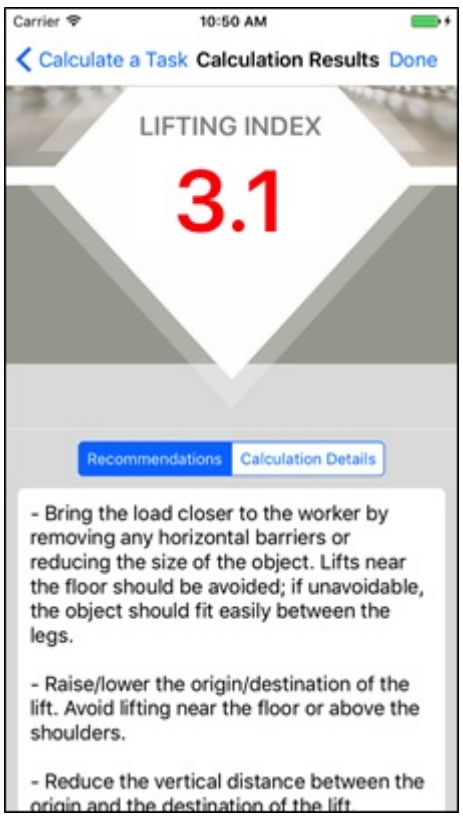


How do I use this app?

- Refer to the RNLE Applications Manual

How do I interpret my results?

- NIOSH recommends that single or multiple lifting tasks have a (composite) lifting index lower than 1.0. NIOSH researchers published a document summarizing studies pertaining to the relationship between the (composite) lifting index and a variety of low back disorders. Detailed interpretations of the (composite) lifting index as a risk estimate are described in the document.
- If your results indicate that you may need to implement an ergonomics program, refer to the revised Elements of Ergonomics Programs.



How can I get a copy of the app?

- On iTunes or Google Play, search for NLE Calc.

What are the relevant publications and studies supporting the RNLE?

- Applications Manual for the Revised NIOSH Lifting Equation
- Provisional Recommended Weight Limits for Manual Lifting During Pregnancy
- Efficacy of the Revised NIOSH Lifting Equation to Predict Risk of Low-Back Pain Associated With Manual Lifting: A One-Year Prospective Study
- NLE Calculation app postcard

Page last reviewed: August 9, 2017